DETAILED ACTION

1. The Request for Continued Examination (RCE) filed on 13 November 2008 under 37 CFR 1.53(d) based on parent Application No. 10/773,433 is acceptable and a RCE has been established. An action on the RCE follows.

2. The amendments filed on 13 November 2008, submitted with the filing of the RCE have been received and entered. Claims 1-13 as amended are pending in the application.

Claim Objections

3. Claim 11 is objected to because of the following informalities: Claim 11 recites the limitation "the installation process" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is suggested that the limitation be changed to -- the process installation --, in order to conform to the limitations recited in parent claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3 and 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolber et al. U.S. Patent 5,261,043 (hereinafter "Wolber"), Elsbree WO 99/66651 and Petty U.S. Patent 5,784,633.

Referring to claim 1, Wolber teaches a method comprising automatically generating a dialog box (the system generates the display of the dialog box 302 shown in Figure 3) (Wolber: column 4, lines 38-67); selecting at least one data element to be displayed from the data that is transmitted in the dialog box (data "454" is selected, i.e. displayed in box 302- field 310, as shown in Figure 3) (Wolber: column 4, lines 38-67); indicating a memory address of the data element (the input data "454 is output and connected as input to another data via connection 210, as shown in Figure 3) (Wolber: column 4, lines 40-53); and assigning the transmitted data that is to be displayed to certain, stored data types (network programming data that is transmitted has a data type, which is converted to a stored, i.e. accepted data type) (Wolber: column 2, lines 27-40 and 63-68); and automatically generating the at least one display box on the operator interface of the computer user station so as to display the data to be displayed utilizing display types that are respectively assigned to the data types (the box shown in Figure 3 displays the data being input into the input terminal according to data types; specifically, the input data shown in Figure 3 is a "Real Number" data type, therefore, the box 204 shown in Figure 3 utilizes the display type associated with the "Real Number" data type, i.e. displaying the data as a real number "454") (Wolber: column 4, lines 38-67). However, although Wolber teaches the display of transmitted data, Wolber fails to explicitly teach the transmitted data is data of an industrial process installation. Elsbree teaches a graphical user interface that displays transmitted data according to data types (Figure 4 shows the display of the computed data; Figure 5 further shows the display

of the received process control data from the machine as digital numerical outputs represented on output 88) (Elsbree: page 2, lines 12-27 and page 9, line 28 – page 11, line 30) similar to that of Wolber. In addition, Elsbree further teaches the display of process installation data (a computer and machine equipment are connected to allow them to communicate process control information) (Elsbree: page 2, lines 12-27). It would have been obvious to one of ordinary skill in the art, having the teachings of Wolber and Elsbree before him at the time the invention was made, to modify the method for transmitting data and displaying data according to display types assigned to data types for the transmitted data of Wolber to include the transmission and display of data according to data types for industrial installation process data, as taught by Elsbree. One would have been motivated make such a combination in order to ease the task of connecting to and controlling a machine to allow communication between the control computer and machine according to a standard communication protocol (Elsbree: page 1, line 19 – column 2, line 5 and column 2, lines 7-14). However, although Wolber and Elsbree teach process installation data type such as process data (the displayed process control data, such as the values displayed by the gauges shown in Figure 4) (Elsbree: page 9, line 28-page 10, line 19), Wolber and Elsbree fail to explicitly teach data types such as status data, control data and regulating data. Petty teaches the classification of transmitted data into a category (conveyed data is classified as user data, status data and control data) (Petty: column 8, lines 20-44) similar to that of Wolber and Elsbree. In addition, Petty further teaches that the data type consists of status data, control data and regulating data (conveyed data consists of status data, control data and regulating data, i.e. input/output user data) (Petty: column 8, lines 20-44). It would have been obvious to one of ordinary skill in the art, having the teachings of Wolber, Elsbree and Petty before him at the time

the invention was made, to modify the assignment of the transmitted data of the process installation to stored data types such as process data of Wolber and Elsbree to include the data types taught by Petty, such as status data, control data and regulating data. The general technique of classifying data into a plurality of categories is well known to one of ordinary skill in the art. Therefore, applying the classification categories of status data, control data and regulating data of Petty to the classification category of process data of Wolber and Elsbree would obtain predictable results of expanding the data type categories available for assignment to transmitted data.

Referring to claim 2, Wolber, as modified, teach wherein the display types are selected from the group consisting of pointers, bars, and numerical displays (Figure 4 shows the display of the computed data via display types such as bars, i.e. reference character 72 and pointers, i.e. reference character 78'; Figure 5 further shows the display of the received process control data from the machine as digital numerical outputs represented on output 88) (Elsbree: page 2, lines 12-27 and page 9, line 28 – page 11, line 30).

Referring to claim 3, Wolber, as modified, teach wherein the display box is retrieved on the operator interface of the computer user station via a link identifier of a further display box (user selection of links, i.e. selection of buttons on a box leads to the display of a further, i.e. a new box) (Wolber: column 6, lines 58-64).

Referring to claim 5, Wolber, as modified, teach wherein the further display box is created via a supporting graphics program (the displayed information is achieved via a graphical program, i.e. iconic programming) (Wolber: column 1, lines 40-44, column 2, lines 27-31 and further shown in Figures 1 and 4).

Referring to claim 6, Wolber, as modified, teach wherein the transmitted data that is to be displayed is selected from the transmitted data of the process installation (a computer and machine are connected to allow them to communicate process control information via computed values and control signals; information at the actual hardware device can be transmitted and output to be displayed in certain data types on the computer) (Elsbree: page 2, lines 12-27 and page 9, line 28 – page 11, line 30).

Referring to claim 7, Wolber, as modified, teach modifying the assignment of the data types and the display types (information on the Input Terminal Information dialog box 304 shown in Figure 3 can be modified via user selection and input to change the selected parameters) (Wolber: column 5, lines 3-47).

Referring to claim 8, Wolber, as modified, teach modifying a number and a type of the display types (information on the Input Terminal Information dialog box 304 shown in Figure 3 can be modified via user selection and input to change the selected parameters; displayed parameters include the type and number/data of the signal attributes) (Wolber: column 5, lines 3-47).

Referring to claim 9, Wolber, as modified, teach modifying a number and a type of the data types (information on the Input Terminal Information dialog box 304 shown in Figure 3 can be modified via user selection and input to change the selected parameters; displayed parameters include the type and number/data of the signal attributes) (Wolber: column 5, lines 3-47).

Referring to claim 10, Wolber teach a method comprising assigning data to respective data types stored in the computer (network programming data that is transmitted has a data type, which is converted to a stored, i.e. accepted data type) (Wolber: column 2, lines 27-40 and 63-

68); assigning the data types to respective display types (the input data shown in Figure 3 is a "Real Number" data type, therefore, the dialog box shown in Figure 3 utilizes the display type associated with the "Real Number" data type, i.e. displaying the corresponding labels under "Type", "Shape", and "Data") (Wolber: column 4, lines 38-67); and automatically generating at least one display box on a graphical user interface of the computer so as to display the data on the graphical user interface with the data types and the display types (the box shown in Figure 3 displays the data being input into the input terminal according to data types; specifically, the input data shown in Figure 3 is a "Real Number" data type, therefore, the dialog box shown in Figure 3 utilize the display type associated with the "Real Number" data type, i.e. displaying the corresponding labels under "Type", "Shape", and "Data") (Wolber: column 4, lines 38-67). However, although Wolber teaches the display of transmitted data, Wolber fails to explicitly teach data transmitted from a technical facility to a computer. Elsbree teaches a graphical user interface that displays transmitted data according to data types (Figure 4 shows the display of the computed data; Figure 5 further shows the display of the received process control data from the machine as digital numerical outputs represented on output 88) (Elsbree: page 2, lines 12-27 and page 9, line 28 – page 11, line 30) similar to that of Wolber. In addition, Elsbree further teaches the display of data transmitted from a technical facility to a computer (a computer and machine equipment are connected to allow them to communicate process control information) (Elsbree: page 2, lines 12-27). It would have been obvious to one of ordinary skill in the art, having the teachings of Wolber and Elsbree before him at the time the invention was made, to modify the method for transmitting data and displaying data according to display types assigned to data types for the transmitted data of Wolber to include the transmission and display of data

according to data types for industrial installation process data, as taught by Elsbree. One would have been motivated make such a combination in order to ease the task of connecting to and controlling a machine to allow communication between the control computer and machine according to a standard communication protocol (Elsbree: page 1, line 19 – column 2, line 5 and column 2, lines 7-14). However, although the combination of Wolber and Elsbree teaches process installation data types such as process data (the displayed process control data, such as the values displayed by the gauges shown in Figure 4) (Elsbree: page 9, line 28-page 10, line 19), Wolber and Elsbree fail to explicitly teach data types such as status data, control data and regulating data. Petty teaches the classification of transmitted data into a category (conveyed data is classified as user data, status data and control data) (Petty: column 8, lines 20-44) similar to that of Wolber and Elsbree. In addition, Petty further teaches that the data type consists of status data, control data and regulating data (conveyed data consists of status data, control data and regulating data, i.e. input/output user data) (Petty: column 8, lines 20-44). It would have been obvious to one of ordinary skill in the art, having the teachings of Wolber, Elsbree and Petty before him at the time the invention was made, to modify the assignment of the transmitted data of the process installation to stored data types, such as process data of Wolber and Elsbree to include the data types taught by Petty, such as status data, control data and regulating data. The general technique of classifying data into a plurality of categories is well known to one of ordinary skill in the art. Therefore, applying the classification categories of status data, control data and regulating data of Petty to the classification category of process data of Wolber and Elsbree would obtain predictable results of expanding the categories of data types available for assignment to transmitted data.

Referring to claim 11, Wolber, as modified, teach wherein the data types define various types of data present in the installation process and wherein the transmitted data is categorized into one of the data types (data that is transmitted is categorized, i.e. converted to an accepted data type; the data types define various types of data such as "Int", "Real", "Text", etc., as shown in Figure 3) (Wolber: column 2, lines 27-40 and 63-68).

Referring to claim 12, Wolber, as modified, teach wherein the assignments between the data types and the display types are pre-stored in the computer user station (information are pre-stored, i.e. input data is converted to already stored/acceptable types, and correspondingly displayed) (Wolber: column 2, lines 37-40 and column 5, lines 3-20).

Referring to claim 13, Wolber, as modified, teach a user modifying the pre-stored assignments between the data types and the display types (information on the Input Terminal Information box 304 shown in Figure 3 can be modified via user selection and input to change the selected parameters) (Wolber: column 5, lines 3-47).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolber et al. U.S. Patent 5,261,043 (hereinafter "Wolber"), Elsbree WO 99/66651 and Petty U.S. Patent 5,784,633, as applied to claims 1 and 3 above, and further in view of Tadokoro et al. U.S. Publication 2002/0156969 (hereinafter "Tadokoro").

Referring to claim 4, the combination of Wolber, Elsbree and Petty teach all of the limitations as applied to claims 1 and 3 above. However, Wolber, Elsbree and Petty fail to explicitly teach the display box is assigned to a library stored in the computer user station. Tadokoro teaches a graphical user interface for displaying information similar to that of Wolber,

Elsbree and Petty. In addition, Tadokoro further teaches the display box is assigned to a library stored in the computer user station (box 290 is associated with the library system of the computer) (Tadokoro: page 20, paragraph 0346). It would have been obvious to one of ordinary skill in the art, having the teachings of Wolber, Elsbree, Petty and Tadokoro before him at the time the invention was made, to modify the dialog box for displaying transmitted installation data via assigned display types of Wolber, Elsbree and Petty to include the association of the dialog box with a library as taught by Tadokoro. One would have been motivated to make such a combination in order to provide a centralized place, such as a type of database system, for fast and easily storing and locating information.

Response to Arguments

6. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TING ZHOU whose telephone number is (571)272-4058. The examiner can normally be reached on Monday - Friday 8:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Chow can be reached on (571) 272-7767. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Ting Zhou/
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